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APPEAL BRIEF

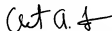
Applicant : Crescenti et al.
App. No : 09/354,063
Filed : July 15, 1999
For : MODULAR BACKUP AND
RETRIEVAL SYSTEM
Examiner : Ella Colbert
Art Unit : 3694
Confirmation No. : 4554

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Christian A. Fox, Reg. No. 58,507**Mail Stop Appeal Brief-Patents**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the Notice of Appeal filed September 27, 2007, Appellant submits this Appeal Brief.

Appellant appeals the rejection of Claims 52-87, which were rejected in a Final Office Action dated August 13, 2007, in the above-captioned patent application.

This Appeal Brief is being filed in accordance with the rules of 37 C.F.R. § 41.37 and includes a Claims Appendix, an Evidence Appendix and a Related Proceedings Appendix.

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I. REAL PARTY IN INTEREST

The real party in interest is the assignee of record, CommVault Systems, Inc.

II. RELATED APPEALS AND INTERFERENCES

Appellant knows of no other appeals or interferences that will directly affect, be directly affected by, or have a bearing on the Board's decision in this Appeal.

III. STATUS OF CLAIMS

Claims 52–87, as listed in the Claim Appendix, remain pending and are the subject of this Appeal.

Claims 1–51 were previously canceled.

On August 13, 2007, the Examiner finally rejected Claims 52–87.

IV. STATUS OF AMENDMENTS

No amendments were made in response to the August 13, 2007 Final Office Action.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present application includes three independent claims. Each independent claim is paraphrased below with citations to corresponding portions of the specification and drawings as required by 37 C.F.R. § 41.37(c)(1)(v).

These citations are provided in order to illustrate specific examples and embodiments of the recited claim language and not to limit or interpret the claims. Furthermore, a citation to a specific paragraph in the following claim summaries should be treated as a citation to all lines of that paragraph.

Claims 52, 65 and 78 are independent claims; however, before discussing each of the claims individually, Appellant has provided a brief overview.

Brief Overview

With reference to Figure 1 (reproduced below), the claims of the present application are directed to methods for the backup and retrieval of data using a modular storage system. In particular, the methods employ a manager module (115) on a first computing device (110), a plurality of media modules (126, 136) on at least another computing device (120, 130) and one or more storage devices (122, 132) to perform hierarchical storage operations.

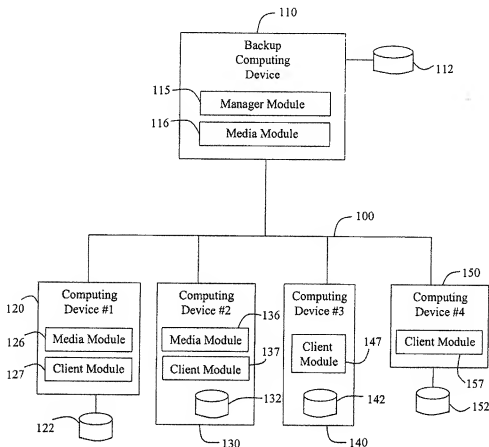


FIGURE 1

Unlike many conventional methods that generally use a single server to perform monolithic storage operations among several storage devices, the claimed methods in the present application provide for a hierarchically arranged storage process with tasks

distributed between the manager module and local, decentralized media modules. Furthermore, each of the media modules maintains a local index of the physical location of data stored by the media module on a storage device. Such a process can advantageously provide for reduced network communication overhead, system scalability, and/or improved data coherency and accessibility in a heterogeneous storage system.

Central Management Module

The manager module (115) coordinates backup and retrieval functions across one or more computing devices (120, 130, 140, 150) and storage devices (122, 132), such as magnetic disks, RAID media, optical media, and/or tape drives. For example, the manager module (115) determines when a particular computing device is in need of a storage operation (e.g., a backup operation) and selects which media module(s) (126, 136) and storage device(s) (122, 132) are to be involved in the storage operation. The manager module (115) can also maintain schedules and/or policies pertaining to backup processes, track and operate global archival parameters of computing devices, and initiate new storage operations.

In certain arrangements, the manager module (115) is a software module programmed to execute on a network device. Moreover, the manager module (115) can comprise multiple sub-agents that perform various management functions. For instance, Figure 2 illustrates further sub-agents (210, 212, 214, 216, 218) that can be associated with the manager module (115).

Media Modules Selected and Controlled by Management Module

Each of the media modules (126, 136) communicates with the manager module (115) to coordinate backup and retrieval of data to and from the storage devices (122, 132). In particular, the media modules (126, 136) direct the physical transfer of data between computing devices (120, 130, 140, 150) and the storage devices (122, 132).

In certain arrangements, the media modules (126, 136) are software modules programmed to execute on a network device. As depicted in Figure 1, the manager module (115) and the media modules (126, 136) can be advantageously located on separate network devices to provide for a two-tiered control of storage operations. Moreover, each media module can comprise multiple sub-agents that perform storage, indexing and related functions. For instance, Figure 2 illustrates further sub-agents (202, 204, 206) that can be used by a particular media module in performing its various storage-related functions.

Local Indexing of Physical Addresses by Media Module

During the backup process, the media module (126, 136) responsible for the physical storage of the data also indexes the data as the information is being stored. In particular, upon successful storage of the data to the storage media (122, 132), the media module (126, 136) creates and/or updates an index detailing a physical location (e.g., address) of the data on the storage device (122, 132), such as block, track and sector numbers of data on a magnetic medium. This index advantageously provides for quicker retrieval and improved management of the stored data.

In certain arrangements, portions of the indices can be communicated from the media module (126, 136) back to the manager module (115). This allows the manager module (115) to function as a directory service identifying which media module should service a specific client request. Most of the index information regarding data stored on the storage devices (122, 132), however, is retained locally by the media agent that was responsible for the storage of the particular data. Such a process advantageously alleviates network bottlenecks at the manager module (115) by localizing the indices and reducing network communication overhead.

Independent Claim 52

Claim 52 is directed to a method for backup and retrieval of data. With reference to Figure 1, the method generally includes providing a management module (115) on a first device (110) that selects one of multiple media software components (126, 136) operating on at least a second device (120, 130) to control backup and retrieval of data to a storage device (122, 132) and recording with the selected media software component a physical address (location) of the data as stored on the storage device (122, 132).

In particular, the method of Claim 52 comprises:

- providing a management software component (115, 300, 500, 810, 911) operating on a first network device (110, 910) (see, e.g., page 8, line 14, through page 9, line 7);
- providing a plurality of media software components (126, 136, 310, 320, 400, 830, 922) communicatively coupled to the management software component (115, 300, 500, 810, 911) operating on at least a second network device (120, 130, 920) (see, e.g., page 9, lines 8–13);
- each of the media software components (126, 136, 310, 320, 400, 830, 922) being communicatively coupled to a storage device (122, 132, 840, 850, 860, 930) storing data (see, e.g., page 9, lines 8–13; page 15, lines 9–11);
- selecting a media software component from among the plurality of media software components (126, 136, 310, 320, 400, 830, 922) using the management software component (115, 300, 500, 810, 911) (see, e.g., page 10, lines 17–19; page 11, lines 6–7);
- controlling the selected media software component using the management software component (115, 300, 500, 810, 911) (see, e.g., page 9, lines 11–20; page 18, lines 10–16);

- controlling backup and retrieval of data to the storage device (122, 132, 840, 850, 860, 930) using the selected media software component comprising at least one software module configured to control backup and retrieval of data to the storage device (122, 132, 840, 850, 860, 930) (see, e.g., page 9, lines 11–20); and
- recording a physical address indicating a location of the data on the storage device (122, 132, 840, 850, 860, 930) using the at least one software module comprising an indexing software module (204, 410) configured to record the physical address on the storage device (122, 132, 840, 850, 860, 930) (see, e.g., page 12, lines 3–8; page 20, lines 7–18).

Independent Claim 65

Claim 65 is directed to a method for backup and retrieval of data. The method comprises:

- providing a management software component (115, 300, 500, 810, 911) operating on a first network device (110, 910) of a plurality of network devices (see, e.g., page 8, line 14, through page 9, line 7);
- providing a plurality of media software components (126, 136, 310, 320, 400, 830, 922) communicatively coupled to the management software component (115, 300, 500, 810, 911) (see, e.g., page 9, lines 8–13);
- the media software components (126, 136, 310, 320, 400, 830, 922) being communicatively coupled to a storage device (122, 132, 840, 850, 860, 930) storing data (see, e.g., page 9, lines 8–13; page 15, lines 9–11);
- the media software components (126, 136, 310, 320, 400, 830, 922) being further capable of controlling backups to the storage device (122, 132, 840, 850, 860, 930) (see, e.g., page 9, lines 11–20);
- selecting a media software component from among the plurality of media software components (126, 136, 310, 320, 400, 830, 922) using the management software

component (115, 300, 500, 810, 911) (see, e.g., page 10, lines 17–19; page 11, lines 6–7);

- controlling the selected media software component using the management software component (115, 300, 500, 810, 911) (see, e.g., page 9, lines 11–20; page 18, lines 10–16);
- controlling backup and retrieval of data to the storage device (122, 132, 840, 850, 860, 930) using the selected media software component comprising at least one software module configured to control the backup and retrieval of data to the storage device (122, 132, 840, 850, 860, 930) (see, e.g., page 9, lines 11–20); and
- recording a physical address of a location of the data on the storage device (122, 132, 840, 850, 860, 930) using the at least one software module comprising an indexing software module (204, 410) configured to record the physical address on the storage device (122, 132, 840, 850, 860, 930) (see, e.g., page 12, lines 3–8; page 20, lines 7–18).

Independent Claim 78

Claim 78 is directed to a method for backup and retrieval of data. The method comprises:

- providing a management software component (115, 300, 500, 810, 911) operating on a first computing device (110, 910) in a network (see, e.g., page 8, line 14, through page 9, line 7);
- the management software component (115, 300, 500, 810, 911) controlling a plurality of media software components (126, 136, 310, 320, 400, 830, 922) communicatively coupled to the management software component (115, 300, 500, 810, 911) (see, e.g., page 9, lines 11–20; page 18, lines 10–16);

- the media software components (126, 136, 310, 320, 400, 830, 922) being communicatively coupled to at least one backup device (122, 132, 840, 850, 860, 930) storing data (see, e.g., page 9, lines 8–13; page 15, lines 9–11);
- providing a client software component (127, 137, 147, 157, 820, 921) that controls backups of any computing device (120, 130, 140, 150, 920) (see, e.g., page 10, line 21, through page 11, line 3; page 20, line 19, through page 22, line 2);
- the client software component (127, 137, 147, 157, 820, 921) communicatively coupled to the management software component (115, 300, 500, 810, 911) and the media software components (126, 136, 310, 320, 400, 830, 922) (see, e.g., page 18, lines 13–16);
- controlling backup and retrieval of data to the at least one backup device (122, 132, 840, 850, 860, 930) using the media software components (126, 136, 310, 320, 400, 830, 922), which control the at least one backup device (122, 132, 840, 850, 860, 930) each of the media software components (126, 136, 310, 320, 400, 830, 922) comprising at least one software module configured to control the backup and retrieval of data to the at least one backup device (122, 132, 840, 850, 860, 930) (see, e.g., page 9, lines 11–20);
- recording a physical address of a location of the data on the backup device (122, 132, 840, 850, 860, 930) using the at least one software module comprising an indexing software module (204, 410) configured to record the physical address on the backup device (122, 132, 840, 850, 860, 930) (see, e.g., page 12, lines 3–8; page 20, lines 7–18); and
- operating at least one of either the media software components (126, 136, 310, 320, 400, 830, 922) or the client software components (127, 137, 147, 157, 820, 921) on a second computing device (120, 130, 140, 150, 920) in the network (see, e.g., page 9, lines 8–13; page 18, lines 3–9).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following rejections are to be reviewed on appeal:

1. The rejection of Claims 52, 65 and 78 under 35 U.S.C. § 112, second paragraph, for failing to interrelate essential elements of the invention; and
2. The rejection of Claims 52–87 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,112,239 to Kenner et al. (“the Kenner patent”).

VII. ARGUMENT

A. Rejection of Claims 52, 65 and 78 under 35 U.S.C. § 112, Second Paragraph

Claims 52, 65 and 78 are not properly rejected under 35 U.S.C. § 112, second paragraph, because each of the claims satisfies the statutory requirement to point out and distinctly claim the subject matter regarded as the invention. In particular, Appellant submits that these claims do not omit essential elements of the invention to the extent that a gap exists between the claimed elements.

Appellant also notes that during the lengthy prosecution of the present application Appellant has held multiple interviews with the Examiner and filed several amendments to address various non-prior art rejections and objections. Notwithstanding, the Examiner has repeatedly raised new rejections based on claim wording and other alleged informalities, even after indicating that such wording would be acceptable.

For instance, for more than four years Appellant has been dealing with various rejections under 35 U.S.C. § 112, second paragraph. In particular, during a three-year span of five consecutive Non-Final Office Actions, the Examiner indicated that the subject matter of independent Claims 52, 65 and 78 would be allowed if rejections under 35 U.S.C. § 112, second paragraph, were overcome. Not until the sixth consecutive Non-Final Office Action (mailed March 1, 2007) did the Examiner withdraw the indication of allowable subject matter in view of a prior art rejection.

1. Independent Claim 52

Claim 52 is directed to a method for backup and retrieval of data. The method includes, among other things, providing (i) a management software component operating on a first network device and (ii) media software components, communicatively coupled to the management software component, operating on a second network device. The method further includes selecting and controlling a particular media software component using the management software component. The selected media software component utilizes a software module to control backup and retrieval of data to a storage device coupled to the media software component. The method further includes using an indexing software module of the selected media software component to record a physical address indicating a location of the data on the storage device.

a. Independent Claim 52 Is Not Vague for Failing to Disclose or Interrelate Essential Elements As Described in the Application

The method of Claim 1 includes using media software components and a management software component, operating on different network devices, to backup and retrieve data.

The Examiner rejected Claim 52 under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. In particular, on page 2 of the August 13, 2007 Final Office Action, the Examiner states (with emphasis added):

Claim 52 has “a first network device” and a “second network device”, however, there is not “the first network device” or “the second network device” *any place in the claim limitations*. Therefore, essential elements are missing from the claim limitations connecting the claims. *There is a disconnect between claim limitations one and two and the other claim limitations three through four. . . .* It is unclear and vague what happens to the “first network device” and the “second network device” after the “management software component” operates on them.

Claim 52 satisfies the statutory requirements of 35 U.S.C. § 112, second paragraph, to point out and distinctly claim the subject matter regarded as the invention. In particular, the

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first and second elements of Claim 52 recite, respectively, “providing a management software component operating on a first network device” and “providing a plurality of media software components . . . operating on at least a second network device” (emphasis added).

As disclosed in the specification and drawings, the phrase “operating on a first network device” means the management software component resides, or is executed, on the first network device (see, e.g., page 4, lines 12–21; page 27, lines 8–10; Figures 1 and 9–12). The same interpretation similarly applies to the phrase “operating on at least a second network device.”

Moreover, Appellant submits that such terminology is commonly and widely used in the software industry. Even the Examiner used the same terminology in a previous rejection indicating that it was unclear what certain claimed software components were operating on or tangibly embodied in (see page 3 of June 15, 2005 Office Action (stating “[i]t is unclear . . . whether the storage device is on a computer readable medium because the software is not operating on anything or tangibly embodied in any place” (emphasis added))).

The remaining elements of Claim 52 continue to refer to, and recite functions of, the management software component and the media software components. Thus, Appellant respectfully submits that there is no “disconnect between claim limitations one and two and the other limitations three through four,” as suggested by the Examiner. There is no requirement that a phrase (e.g., “first network device”) in one claim element must be repeated in other claim elements. M.P.E.P. §2172.01, which is relied upon by the Examiner in the August 13, 2007 Final Office Action, even states that “[a] claim does not necessarily fail to comply with 35 U.S.C. 112, second paragraph where the various elements do not function simultaneously, are not directly functionally related, do not directly intercooperate, and/or serve independent purposes.”

Furthermore, Appellant respectfully submits that it is irrelevant for the patentability of Claim 52 what happens to the first and second network devices while or after the management software component and media software components, respectively, operate (or

reside) on them. Rather, the recitation of the first and second network devices in the method of Claim 52 demonstrates the relationship between the management software component and the media software components performing the various acts of the method.

b. The Corrective Language Suggested by the Examiner is Not Necessary for Compliance with 35 U.S.C. § 112, Second Paragraph

In the August 13, 2007 Final Office Action, the Examiner makes three suggestions on how to rewrite the claims in order to remedy the 35 U.S.C. § 112 rejection. In particular, the Examiner suggests:

- 1) The “‘first network device’ and the ‘second network device’ should be incorporated into the body of the claim again;”
- 2) “[I]ncorporat[ing] the ‘backup and retrieval data operating on a first network device and a second network device’ from the preamble into the body of the claim;” and
- 3) The claim element “would be better and clearer to recite ‘the first and second network devices after the management software components and media software components reside on them.’”

Appellant maintains that no such amendments need to be made to Claim 52 and that Claim 52, as pending, meets the requirements of 35 U.S.C. § 112, second paragraph. Moreover, Appellant suggests that such language is, itself, confusing, and Appellant is unable to see how such language assists in pointing out and distinctly claiming the subject matter regarded as the invention.

c. Summary

Because Claim 52 does not omit essential elements of the invention to the extent that a gap exists between the claimed elements, Appellant maintains that the rejection of Claim 52 under 35 U.S.C. § 112, second paragraph, is improper.

2. Independent Claims 65 and 78

The 35 U.S.C. § 112 rejection of independent Claims 65 and 78 is improper for the same reasons set forth above with respect to Claim 52. Thus, for the purposes of this Appeal with respect to the rejection under 35 U.S.C. § 112, second paragraph, Claims 65 and 78 stand or fall with Claim 52.

B. Rejection of Claims 52–87 under 35 U.S.C. § 102(e) as Being Anticipated by the Kenner Patent

Claims 52–87 are not properly rejected under 35 U.S.C. § 102(e) because the Kenner patent does not disclose every limitation of each rejected claim.

1. Independent Claim 52

Independent Claim 52 is directed to a method for the backup and retrieval of data. In general, the method utilizes a modular storage approach such that a first software component manages the overall backup and retrieval functions across one or more computers. A second software component, operating on a different network device than the first software component, controls and manages the physical transfer of data to and from a storage device based on information received from the first software component.

The second software component also maintains an index that preserves the location of data stored on the storage device. As discussed above, this indexing at the second software module can advantageously alleviate network bottlenecks at the first software module by localizing the indices and reducing network communication overhead.

In particular, the method of independent Claim 52 includes providing a management software component operating on a first network device and media software components operating on at least a second network device. The management software component selects and controls one of the media software components, which are each coupled to one or more storage devices.

The method further includes using a software module of the selected media software component to control backup and retrieval of data to a storage device. An indexing module

of the selected media software component then records a physical address indicating a location of the data on the storage device.

a. The Kenner Patent Does Not Disclose Selecting and Controlling a Media Software Component with a Management Component

The data backup and retrieval method of Claim 52 includes selecting and controlling a media software component from among a plurality of media software components using a management software component.

The Kenner patent is directed to a system and method for acquiring network performance information and selecting optimum delivery sites for receiving multimedia content (see, e.g., column 1, lines 6–12). As shown and described with reference to Figure 1, the Kenner system includes multiple user terminals (12, 16) that are connected to the Internet (10) through an Internet service provider (ISP) (14). The user terminal (12) further includes a configuration utility (34) that determines which of the delivery sites (26, 28, 30) is best suited for improved network communication.

The Examiner asserts that the ISP (14) of the Kenner patent discloses the “management software component,” which performs the claimed functions of “selecting a media software component from among [a] plurality of media software components” and “controlling the selected media software component” so as to backup and retrieve data from a storage device. In particular, on page 3 of the August 13, 2007 Final Office Action, the Examiner indicates that “the browser (38) Fig. 1 is one of the selectable software components and gets selected by simply using it.”

Claim 52, however, reads that the management software component is used to select one of the media software components. The Kenner patent does not disclose that the ISP (14) selects one of multiple media software components (e.g., the browser (38)). Rather, the Kenner patent merely discloses that the ISP (14) is a computer, router, or terminal server connected to the Internet and is used to host user terminals (see, e.g., col. 7, lines 18–28).

Furthermore, the Kenner patent does not disclose that the ISP (14) controls any selected media software component (e.g., the browser (38)). Although the Examiner alleges that the ISP (14) may control content being sent to the browser (38), the Kenner patent does not disclose that the ISP (14) controls the browser (38) in any way.

b. The Kenner Patent Does Not Disclose Controlling Backup and Retrieval of Data and Recording the Physical Location of the Data by a Media Software Component

Independent Claim 52 further recites that the selected media software component controls backup and retrieval of data to a storage device and includes an indexing software module that records the physical address of the data as stored on the storage device.

The Kenner patent does not disclose using a selected media software component to control backup and retrieval of data to a storage device and recording a physical address, with an indexing software module of the selected media software component, to indicate a location of the data stored on the storage device. On page 4 of the August 13, 2007 Final Office Action, the Examiner states that:

[B]rowser (38) is the selected component which controls the retrieval of data once the data has been successfully retrieved, it is backed up on the client device. . . . [T]he browser (38) *inherently* records an IP address temporarily by displaying it to the user in the browser window. *Some browsers also store cookies having IP addresses.* These IP addresses are the recorded physical addresses. The software instructions which cause the IP address to be displayed in the browser window, or the instructions to collect cookies would be the indexing software. An index can be as little as one line of recorded information, and if you have instructions that can record the one line, you have indexing software.

Thus, it appears that in making the anticipation rejection the Examiner is relying on features that are allegedly “inherently” disclosed in the Kenner patent.

However, to establish inherency, it must be clear “that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency . . . may not be established by probabilities or

possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient” (see M.P.E.P. § 2112 (IV) (emphasis added)).

The Examiner has not shown, and the Kenner patent does not disclose, that the browser (38) necessarily controls backup and retrieval of data to a storage device and necessarily records a physical address indicating a location of the data on the storage device using an indexing software module. Rather, the reasoning by the Examiner appears to be based on hypothetical circumstances or possibilities. For example, the Examiner even acknowledges that the technical reasoning supporting the rejection does not apply in all situations (see, e.g., page 4 of August 13, 2007 Final Office Action (stating “Some browsers also store cookies having IP addresses” (emphasis added))).

Moreover, even accepting the Examiner’s reliance on “inherent” features, which Appellant does not, the Examiner still has not established a prima facie case of anticipation. For instance, the Kenner patent does not disclose using an indexing software module of the selected media software component in “recording a physical address indicating a location of the data on the storage device.” IP addresses are not physical locations of data on a storage device coupled to the media software component that controls backup and retrieval of the data. Rather, an IP address merely represents a numeric identifier for a computing device on a network (e.g., the Internet) (see, e.g., col. 17, lines 1–13 of the Kenner patent).

c. Summary

Because the Kenner patent does not disclose each and every element of independent Claim 52, Appellant maintains that the rejection of Claim 52 under 35 U.S.C. § 102(e) is improper.

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2. Claims 53–87

The rejection of independent Claims 65 and 78 and dependent Claims 53–64, 66–77 and 79–87 is improper for the same reasons set forth above with respect to the patentability of Claim 52 and because of the additional limitations recited therein. However, for the purposes of this Appeal, Claims 53–87 stand or fall with Claim 52.

C. Conclusion

In view of the foregoing arguments distinguishing Claims 52–87 over the art of record, Appellant respectfully requests that the rejections of these claims be reversed.

Please charge any additional fees, including any fees for additional extensions of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 11/19/2007

By: Christian A. Fox
Christian A. Fox
Registration No. 58,507
Attorney of Record
2040 Main Street, Fourteenth Floor
Irvine, California 92614
(949) 760-0404

VIII. CLAIMS APPENDIX

1.-51. (Canceled)

52. A method for backup and retrieval of data, the method comprising:

providing a management software component operating on a first network device;

providing a plurality of media software components communicatively coupled to the management software component operating on at least a second network device, each of the media software components being communicatively coupled to a storage device storing data;

selecting a media software component from among the plurality of media software components using the management software component;

controlling the selected media software component using the management software component;

controlling backup and retrieval of data to the storage device using the selected media software component comprising at least one software module configured to control backup and retrieval of data to the storage device; and

recording a physical address indicating a location of the data on the storage device using the at least one software module comprising an indexing software module configured to record the physical address on the storage device.

53. The method of claim 52, further comprising controlling backup and retrieval of data to the storage device using the selected media software component comprising at least a second software module configured to control the backup and retrieval of data to the storage device, and to manage the physical transfer of data to and from the storage device using the second software module comprising a data mover software module configured to manage the physical transfer of data to and from the storage device.

54. The method of claim 52, further comprising controlling backup and retrieval of data to the storage device using the selected media software component comprising at least a second software module configured to control the backup and retrieval of data to the storage device and physical media of the storage device using the second software module comprising a library software module configured to control the physical media of the storage device.

55. The method of claim 52, further comprising coordinating usage of the storage device using the management software component comprising at least a second software module configured to coordinate usage of the storage device.

56. The method of claim 55, further comprising storing backup and retrieval preferences of a software application using the second software module comprising an application software module configured to store backup and retrieval preferences of a software application.

57. The method of claim 55, further comprising tracking the location of data across library media using the second software module comprising an archive software module configured to track the location of data across library media.

58. The method of claim 55, further comprising managing system processes using the second software module comprising a jobs software module configured to manage system processes.

59. The method of claim 55, further comprising tracking usage of the storage device using the second software module comprising a media usage software module configured to track usage of the storage device.

60. The method of claim 55, further comprising coordinating the transfer of data between system software components, software modules, and the storage device using the second software module comprising a data transfer software module configured to

coordinate the transfer of data between system software components, software modules, and the storage device.

61. The method of claim 52, further comprising providing a client software component, communicatively coupled to the management software component and the selected media software component, that controls backups of a particular network device.

62. The method of claim 61, wherein the client software component operates on the second network device.

63. The method of claim 61, wherein the client software component operates on a third network device.

64. The method of claim 52, further comprising communicating the physical address to the management software component using the selected media software component.

65. A method for backup and retrieval of data, the method comprising:

- providing a management software component operating on a first network device of a plurality of network devices;

- providing a plurality of media software components communicatively coupled to the management software component, the media software components being communicatively coupled to a storage device storing data, the media software components being further capable of controlling backups to the storage device;

- selecting a media software component from among the plurality of media software components using the management software component;

- controlling the selected media software component using the management software component;

controlling backup and retrieval of data to the storage device using the selected media software component comprising at least one software module configured to control the backup and retrieval of data to the storage device; and

recording a physical address of a location of the data on the storage device using the at least one software module comprising an indexing software module configured to record the physical address on the storage device.

66. The method of claim 65, further comprising controlling backup and retrieval of data to the storage device using the selected media software component comprising at least a second software module configured to control, and to manage the physical transfer of data to and from the storage device using the second software module comprising a data mover software module configured to manage the physical transfer of data to and from the storage device.

67. The method of claim 65, further comprising controlling backup and retrieval of data to the storage device using the selected media software component comprising at least a second software module configured to control the backup and retrieval of data to the storage device and physical media of the storage device using the second software module comprising a library software module configured to control the physical media of the storage device.

68. The method of claim 65, further comprising coordinating usage of the storage device using the management software component comprising at least a second software module configured to coordinate usage of the storage device.

69. The method of claim 68, further comprising storing backup and retrieval preferences of a software application using the second software module comprising an application software module configured to store backup and retrieval preferences of a software application.

70. The method of claim 68, further comprising tracking the location of data across library media using the second software module comprising an archive software module configured to track the location of data across library media.

71. The method of claim 68, further comprising managing system processes using the second software module comprising a jobs software module configured to manage system processes.

72. The method of claim 68, further comprising tracking usage of the storage device using the second software module comprising a media usage software module configured to track usage of the storage device.

73. The method of claim 68, further comprising coordinating the transfer of data between system software components, software modules, and the storage device using the second software module comprising a data transfer software module configured to coordinate the transfer of data between system software components, software modules, and the storage device.

74. The method of claim 65, further comprising providing a client software component, communicatively coupled to the management software component and the selected media software component, that controls backups of a particular network device.

75. The method of claim 74, wherein the client software component operates on the second network device.

76. The method of claim 74, wherein the client software component operates on a third network device.

77. The method of claim 65, further comprising communicating the physical address to the management software component using the selected media software component.

78. A method for backup and retrieval of data, the method comprising:

providing a management software component operating on a first computing device in a network, the management software component controlling a plurality of media software components communicatively coupled to the management software component, the media software components being communicatively coupled to at least one backup device storing data;

providing a client software component that controls backups of any computing device, the client software component communicatively coupled to the management software component and the media software components;

controlling backup and retrieval of data to the at least one backup device using the media software components, which control the at least one backup device each of the media software components comprising at least one software module configured to control the backup and retrieval of data to the at least one backup device;

recording a physical address of a location of the data on the backup device using the at least one software module comprising an indexing software module configured to record the physical address on the backup device; and

operating at least one of either the media software components or the client software components on a second computing device in the network.

79. The method of claim 78, further comprising controlling backup and retrieval of data to the at least one backup device using the media software components which each comprise at least a second software module configured to control backup and retrieval of data to the at least one backup device, and to manage the physical transfer of data to and from the at least one backup device using the second software module comprising a data mover software module configured to manage the physical transfer of data to and from the at least one backup device.

80. The method of claim 78, further comprising backup and retrieval of data to the at least one backup device using the media software components which each comprise at least a second software module configured to control backup and retrieval of data to the at least one backup device, and controlling physical media of the at least one backup device using the second software module comprising a library software module configured to control the physical media of the at least one backup device.

81. The method of claim 78, further comprising coordinating usage of the at least one backup device using the management software component comprising at least a second software module configured to coordinate usage of the at least one backup device.

82. The method of claim 81, further comprising storing backup and retrieval preferences of a software application using the second software module comprising an application software module configured to store backup and retrieval preferences of a software application.

83. The method of claim 81, further comprising tracking the location of data across library media using the second software module comprising an archive software module configured to track the location of data across library media.

84. The method of claim 81, further comprising managing system processes using the second software module comprising a jobs software module configured to manage system processes.

85. The method of claim 81, further comprising tracking usage of the at least one backup device using the second software module comprising a media usage software module configured to track usage of the at least one backup device.

86. The method of claim 81, further comprising coordinating transfer of data between system software components, software modules, and the at least one backup device using the second software module comprising a data transfer software module

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configured to coordinate the transfer of data between system software components, software modules, and the at least one backup device.

87. The method of claim 78, further comprising communicating the physical address to the management software component using the indexing software module.

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IX. EVIDENCE APPENDIX

None.

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X. RELATED PROCEEDINGS APPENDIX

None.

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